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State LEED Experience

WASHINGTON

I spoke with Stuart Simpson, Sustainable Building Advisor, Washington Department of General Administration about their LEED experience.

State law now requires public buildings that receive funding from the state to be designed and certified to at least the LEED Silver standard. The law became effective in 2005 and applies to buildings larger than 5,000 square feet. Renovation projects with construction costs greater than 50 percent of the assessed value of the building or facility also require LEED Silver certification.

The Department of General Administration (GA) has worked with 60 construction projects since the LEED Silver certification requirement law was passed in 2005. The first new construction projects impacted by the law will be completed in late 2007 and 2008. Under Washington law the GA is able to grant exceptions to the LEED requirements in some special cases where LEED certification is not practical or justified. Four exceptions were granted to agencies with unique building needs that did not justify meeting LEED standards. These projects included a greenhouse, car ferry maintenance facility and several maintenance shops.

Washington has found that increased costs for construction and design fees for LEED certification has ranged from 1/2% to 3 1/2% of project costs.

In Washington State there is also requirement to perform life cycle cost analyses on new or major remodels of all publicly owned or leased facilities that are 25,000 square feet or more. This requirement is based in law: Revised Code of Washington (RCW) 39.35 and the Washington Administrative Code (WAC) 180-27-075.

OREGON

Oregon state government does not have a LEED certification requirement at the current time. However, Oregon does offer business tax credits for sustainable buildings that meet LEED certification for new or existing buildings.

To be eligible for the credits Oregon requires a building must achieve at least a minimum of a silver rating. Oregon also requires LEED projects to achieve additional energy performance improvements above the minimum or required LEED energy criteria. Projects must attain at least two points under the Energy and Atmosphere Credit section for exceeding energy code requirements and an another point for additional commissioning efforts. These additional requirements for energy performance result in new buildings being designed to exceed ASHRAE Standard 90.1-2004 by 14 percent. In the case of an existing building renovation the energy performance of the facility must be improved at least 7 percent to earn 2 additional energy points.

COLORADO

Senate Bill 07-051 requires state agencies or departments embarking upon a substantial renovation, design, or construction of a state-assisted facility of more than 5,000 square feet to pursue U.S. Green Building Council LEED Gold certification, as long as construction costs can be recouped from decreased operational costs within 15 years.

Senate Bill 07-051 requires the Colorado Department of Personnel and Administration to consult with the Colorado Commission on Higher Education to adopt a "high performance standard certification program" for state building projects.

The program must:

- include quantifiable and verifiable standards;
- reduce long-term operating costs (e.g., energy, water consumption);
- recoup increased initial costs within 15 years through lower operating costs;
- improve indoor environmental quality;
- encourage the use of local building products and materials; and
- comply with the federal standards for historic properties.

The bill applies to facilities that:

- are substantially renovated, designed, or constructed with state moneys;
- are at least 5,000 gross square feet;
- include heating, ventilation, or air conditioning systems; and
- have not entered a design phase prior to January 1, 2008.

The bill affects any renovation that exceeds 25 percent of the property's value. SB 07-051 exempts certain projects, including:

- historic buildings;
- projects that cannot reduce operating costs enough to recoup the initial costs within 15 years;
- projects that substantially increase the cost of the building; and
- projects with extenuating circumstances.

Further, the bill does not apply to higher education facilities constructed with student fees, buildings financed by the Colorado Housing and Finance Authority, or local government buildings financed with severance tax revenue. If certification will increase a project's initial building cost by more than 5 percent, the Capital Development Committee (CDC) must review the cost before approving the project. The department is required to report annually to the CDC regarding the high performance standard certification program.

MASSACHUSETTS

A Massachusetts executive order in 2007 requires state agencies undertaking new construction projects to build to LEED Silver level or above.

ARIZONA

Arizona Executive Order 2005-05 requires new state-funded buildings to meet at least the LEED Silver level standard as a minimum requirement.

NEW MEXICO

New Mexico Executive Order 2006-001 requires all new state agency buildings over 15,000 square feet and over 50kW peak electrical demand to achieve at least a LEED Silver level rating.

CALIFORNIA

On December 14, 2005, California's governor signed Executive Order S-20-04, creating a Green Building Action Plan to improve the energy performance of all state buildings and reduce grid-based energy usage in state buildings by 20% of 2003 levels by 2015. Under this order, all new and renovated buildings must be rated to at least the "Silver" level of LEED* standards. EO S-20-04 also requires agencies to seek out office space leases in buildings with the ENERGY STAR rating for spaces of 5,000 square feet or more, to identify the most appropriate ways of achieving energy efficiency in their buildings, and to purchase ENERGY STAR products when cost effective.

CONNECTICUT

Public Act No. 06-187, enacted in 2006, required the Connecticut Office of Policy and Management, in consultation with the commissioner of public works, the commissioner of environmental protection and the commissioner of public safety, to adopt building construction regulations for state facilities. The construction standards must be consistent with or exceed the U.S. Green Building Council's LEED Silver rating for new commercial construction and major renovation projects, or an equivalent standard. Certain state building projects were originally exempt from the standard, but [HB 7432 of 2007](#) removed those exemptions. State building projects that now must comply with the standard include:

- Any new construction of a state facility with a projected cost \$5 million or more, of which \$2 million or more is state funding, and is approved and funded on or after January 1, 2008.
- Renovation of a state facility that is projected to cost \$2 million or more, of which \$2 million or more is state funding, approved and funded on or after January 1, 2008.
- New construction of a facility that is projected to cost \$5 million or more, of which \$2 million or more is state funding, and is authorized by the Connecticut General Assembly on or after January 1, 2009.
- Renovation of a public school facility that is projected to cost \$2 million or more, of which \$2 million or more is state funding, and is authorized by the General Assembly on or after January 1, 2009.

FLORIDA

Executive Order 07-126, signed in July 2007, furthered the cause of sustainability in Florida by making new requirements and goals to decrease greenhouse gas emissions across all state agencies and departments under the direction of the Governor, and to increase the energy efficiency of state buildings.

To achieve this goal, the Department of Management Services has been directed to adopt the US Green Building Council's Leadership in Energy and Environmental Design for New Construction (LEED*-NC) for all new buildings, and to strive for Platinum Level certification. Further, all state agencies and departments under the direction of the Governor may not enter into new leasing agreements for office space that does not meet Energy Star building standards.

MICHIGAN

Regarding state buildings, all capital-outlay projects over \$1 million for buildings occupied by state agencies, departments, universities, and community colleges are required to be designed and constructed in accordance with the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system. The new executive directive also requires the DMB to ensure that all new construction and renovations of state buildings, including state-leased buildings, strive to score at the LEED Platinum level on the Existing Building, New Construction, and Commercial Interiors scorecards when attainable. This is an expansion of the old policy which only required the lowest level of LEED certification; platinum is the highest level. The 2007 directive also added numerous other requirements relating to departmental energy use and carbon tracking, recycling, agency coordination, alternative fuels, and alternative vehicles.

NEVADA

Effective July 1st, 2007, each occupied public building whose construction will be sponsored or financed by the state must, when completed, meet the requirements to be certified at or meet the equivalent of the base level or higher in accordance with the LEED System, or an equivalent standard. The legislation also

requires that during each biennium, at least two occupied public buildings whose construction will be sponsored or financed by the State must be designated as demonstration projects that meet the requirements to be certified at or meet the equivalent of the LEED “Silver” level or higher.

Finally, before initiating the construction or renovation of any occupied public building which is larger than 20,000 square feet, Nevada state agencies must complete an analysis of the cost to construct, operate, and maintain the building over its expected lifetime. The analysis should identify energy conservation measures with payback of 10 years or less and renewable energy measures that could be incorporated into construction or renovation (such as passive and active solar, wind, and geothermal). The agency must then consider the results of this analysis in determining the design of the building. Renewable energy should be incorporated into plans when in the best interest of the state.

LEED Cost Issues

Additional construction costs and design fees for meeting LEED certification are not excessive. Integrating sustainable design into the project during the development and design phases can significantly reduce the additional costs for LEED certification. Overall costs for construction projects could increase significantly if sustainable design elements are considered late in the building design phase and projects have to go through a redesign to meet LEED standards. However, experience in the federal government and states has shown that additional costs can range from zero to seven percent for a wide variety of building types.

Cost Study Examples Attached

***The Costs and Financial Benefits of Green Buildings -
A Report to California’s Sustainable Building Task Force
October 2003***

A nation wide review of 33 green buildings showed a construction premium for meeting LEED certification ranged from zero percent to 7.5 percent.

***GSA LEED Cost Study
U.S General Services Administration.
October 2004***

This study was done to estimate the cost to develop green federal facilities for the General Services Administration. The detailed study examined the extra costs to build two typical federal building types, a new mid-size federal courthouse and a mid-size federal office building renovation. The construction cost impacts for Silver certification ranged from a low of negative .03 percent to a high of 4.4 percent more for the new federal courthouse example. Silver certification for the office building renovation example ranged from 3.1 percent to 4.2 percent.